

Application Number 09/994,146
Amendment dated September 21, 2004
Reply to Office Action of May 21, 2004

Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1.-17. (Canceled)

18. (Currently Amended) A semiconductor device having a silicon-on-insulator (SOI) structure, comprising:

an insulating layer;

an insular silicon region having first conductivity-type impurity ions formed on the insulating layer;

a source region having second conductivity-type impurity ions formed at an end of the insular silicon region;

a drain region having second conductivity-type impurity ions spaced apart from the source region at the other end of the insular silicon region;

an insular body region formed in the insular silicon region, the insular body region being at least partially disposed between the source and drain regions, a channel being formed on the insular body region;

a gate insulating layer formed on the insular body region;

a gate conductive layer formed on the gate insulating layer;

a body contact region having first conductivity-type impurity ions, the body contact region being in contact with and connected to the source region and the insular body region;

a first conductive layer formed on the source region, the gate conductive layer and the body contact region, the first conductive layer comprising a plurality of separated portions ;
and

a source electrode formed on the first conductive layer and connected to the body contact region via the first conductive layer, the source electrode comprising a metal contact disposed directly over the source region, such that the metal contact is electrically coupled to the body contact region.

wherein the source and drain regions have a symmetrical structure.

19. (Previously Presented) The semiconductor device of claim 18, wherein the body contact region is formed on one side of the source region.

20. (Previously Presented) The semiconductor device of claim 18, wherein the body contact region is formed on both sides of the source region.

21. (Previously Presented) The semiconductor device of claim 18, wherein the insulating layer is an oxide layer.

22. (Previously Presented) The semiconductor device of claim 18, wherein the insular silicon region is a single crystal silicon layer.

23. (Previously Presented) The semiconductor device of claim 18, further comprising:

a gate electrode electrically connected to the gate conductive layer; and
a drain electrode electrically connected to the drain region.

24. (Currently Amended) The semiconductor device of claim 18, wherein the first conductive layer is a salicide layer.

25. (Previously Presented) The semiconductor device of claim 24, wherein the

salicide layer is one of a cobalt salicide layer, a titanium salicide layer, and a nickel salicide layer.

26. (Previously Presented) The semiconductor device of claim 18, wherein the first conductivity-type impurity ions are p-type and the second conductivity-type impurity ions are n-type.

27. (Previously Presented) The semiconductor device of claim 18, wherein the first conductivity-type impurity ions are n-type and the second conductivity-type impurity ions are p-type.

28. (Currently Amended) A semiconductor device having a silicon-on-insulator (SOI) structure, comprising:

- an insulating layer;
- an insular silicon region having first conductivity-type impurity ions formed on the insulating layer;
- a source region having second conductivity-type impurity ions formed at an end of the insular silicon region;
- a drain region having second conductivity-type impurity ions spaced apart from the source region at the other end of the insular silicon region;
- an insular body region formed in the insular silicon region, the insular body region being at least partially disposed between the source and drain regions, a channel being formed on the insular body region;
- a gate insulating layer formed on the insular body region;
- a gate conductive layer formed on the gate insulating layer;
- a body contact region having first conductivity-type impurity ions, the body contact region being in contact with and connected to the source region and

the insular body region;

a first conductive layer formed on the source region, the gate conductive layer, and the body contact region, the first conductive layer comprising a plurality of separated portions ; and

a source electrode formed on the first conductive layer and connected to the body contact region via the conductive layer, the source electrode comprising a metal contact disposed directly over the source region, such that the metal contact is electrically coupled to the body contact region,

wherein the body contact region is not overlapped with the gate conductive layer.

29. (Previously Presented) The semiconductor device of claim 28, wherein the body contact region is formed on one side of the source region.

30. (Previously Presented) The semiconductor device of claim 28, wherein the body contact region is formed on both sides of the source region.

31. (Previously Presented) The semiconductor device of claim 28, wherein the insulating layer is an oxide layer.

32. (Previously Presented) The semiconductor device of claim 28, wherein the insular silicon region is a single crystal silicon layer.

33. (Currently Amended) The semiconductor device of claim 28, wherein the first conductive layer is a salicide layer.

34. (Previously Presented) The semiconductor device of claim 33, wherein the salicide layer is one of a cobalt salicide layer, a titanium salicide layer, and a nickel salicide layer.

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35. (Previously Presented) The semiconductor device of claim 28, wherein the first conductivity-type impurity ions are p-type and the second conductivity-type impurity ions are n-type.

36. (Previously Presented) The semiconductor device of claim 28, wherein the first conductivity-type impurity ions are n-type and the second conductivity-type impurity ions are p-type.